

**BANKING PLATFORMS IN THE RURAL SETTING
A CASE STUDY OF MAKUENI COUNTY**

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D61/81774/2015**

**RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF
MASTER OF BUSINESS ADMINISTRATION FACULTY OF
BUSINESS AND MANAGEMENT SCIENCES - UNIVERSITY OF
NAIROBI**

2023

DECLARATION

This project is my original work and has not been presented for award in any other university.

Signature  _____

Date: October 16, 2023

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This research project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

This research endeavor is devoted to professionals in the field of higher education and their collaborators who strive to effect meaningful changes in the administration of tertiary institutions, encompassing both public and private universities, colleges, technical training institutes and vocational schools.

May the data presented in this study serve to inform and enhance the discernment and proficiency of administrators, managers and leaders within these institutions located in Kenya, Africa, and other relevant regions.

ACKNOWLEDGEMENT

The collaborative efforts of numerous individuals were indispensable in bringing this project to fruition. During the composition of this project, I was graciously offered ample aid and encouragement. I would like to thank Prof. Gituro Wainaina for offering valuable support and assistance throughout the academic programme. It has been an honor to work under his guidance and to experience unwavering exposure of his expertise in the operations management field. His astute feedback and constructive criticism motivated me to refine both my analytical abilities and scholarly prose.

I would also like to acknowledge and thank my parents for their support, encouragement, thought-provoking conversations and resolve to ensure that my master's programme was successfully completed.

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ABBREVIATIONS

ATM	Automated Teller Machine
BECTA	British Educational Communications and Technology Agency
CBK	Central Bank of Kenya
ICT	Information and Communications Technology
KCB	Kenya Commercial Bank
KNBS	Kenya National Bureau of Statistics
MNO	Mobile Network Operator
OECD	Organization for Economic Co-operation and Development
PEOU	Perceived Ease of Use
SACCO	Savings and Credit Co-operatives
SME	Small and Medium Enterprises
TAM	Technology Acceptance Model
TALC	Technology Adoption Lifecycle
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action

ABSTRACT

The emergence of banking has had a profound impact on global technical innovation, economic growth, and social development. This impact has been largely driven by advancements in digitization and technology. The objective of this study was to investigate the adoption and usage of alternative banking platforms in the rural area of Makueni County, Kenya, in light of the challenges encountered during the COVID-19 pandemic. The study was conducted with the guidance of two theoretical frameworks: the Technology Acceptance Model (TAM) and the Technology Adoption Lifecycle (TAL). The research examined the convenience and user-friendliness of alternative banking platforms, taking into account factors such as smartphones, internet accessibility, and technological proficiency. The findings showed that having technological expertise was crucial for adopting alternate banking methods. However, the lack of smartphones and internet connectivity posed a barrier to accessing these services. The Automated Teller Machine (ATM) and mobile banking platforms were found to be the most suitable options based on their frequency of use. This preference is driven by the convenience and simplicity that these platforms offer. The study identified several factors that have an impact on the adoption of banking platforms. Customers were driven to adopt alternate banking due to several key factors: security, customer privacy, simplicity, cost-effectiveness, and user-friendly processes. Furthermore, it has been proposed to implement financial literacy programmes in order to enhance awareness and advocate for the advantages of digital banking platforms. Additionally, proposed recommendations have been made to improve financial inclusion in Makueni County. For instance, financial institutions should make it a priority to enhance technological access, specifically by focusing on improving phone availability and internet connectivity in rural areas. Increasing internet accessibility can be achieved through collaboration with mobile network operators to offer affordable mobile data packages. Additionally, financial institutions need to prioritize the improvement of simplicity, convenience, cost-effectiveness, and security in alternative banking options, such as ATM and mobile banking. This will help to establish trust and promote the widespread use of these services. The value of this study is its ability to provide insights into the adoption and usage of banking platforms in rural settings. It contributes to the existing literature by enriching it and also offers theoretical and empirical frameworks for future research. The findings can assist stakeholders in the banking sector with strategizing and improving their performance, all while ensuring compliance with government regulations and infrastructure development.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Emergence of banking has played pivotal role in enhancement of technical innovation globally. Similarly, it has impacted the emerging economic and social realms. Digitization has greatly played a key role in transition of banking because of innovation. Although several instances of innovation have been directly linked to developed economies, technology remains an imminent component whose capability to unleash vital and rapid transitions in the emerging economies across the globe (Jiang & Carpenter, 2017). Thompson and Strickland (2014) define a banking platform as a designated technological market found and operationalized by a respective banking institution purposefully with an intent of banking and non-banking service provision. Beside operation as a branch teller, the institution avails a platform in which customers conduct withdrawal, deposit, transmittance and payments among other services. Additionally, Biondi (2018) noted that banking amenities provide elemental banking features which include payment, deposits, credits grants, withdrawal and highly complex functions including asset controlling.

The study was guided by the Technology Acceptance Model (TAM) postulated by (Davis, 1989). Similarly, the study adopted the use of the model of Technology Adoption Lifecycle (TAL) as suggested by (Rogers, 2003). According to Rogers (2003), TAL model is a description of customer habits associated with the acceptance of an emerging product or feature, which is often separated out into inventor, laggards and early adopters. Furthermore, Davis (1989) defines the TAM as a theory that entails information systems in which adopted model is indicative of end user interaction with the technology. The

model largely portrays the ease and usefulness associated with TAM in the minds of the end users.

Moreover, Awa & Inyang (2013) and Awa, Ojiabo and Emecheta (2015) advocate that there is existence of general perceived harmony between individual's acceptance of emerging technology which is foreseeable in the likelihood and reliability associated with TAM. Since 1980s the TAM adopted in numerous studies based on revealing vital decision related to the use and innovation accessibility among the technological end-users. In a study conducted by Rogers (2003), it is revealed that the adoption of mobile banking avenues can effectively be assessed while using TAM. The TAM model stipulates vital states which are adhered in the process of innovation. Arguably, the highly prevalent stages commence with the recognition of the essence of advanced technology, followed by the testing of the technology, intention to embrace and eventual usage stage. Such stages play essential role as they form the diffusion stage in which innovation is put into practice.

The pressure on banks to change is more significant today than before. Increasing global competition, greater economic integration, advances in Information and Communications Technology (ICT) and informed customers mean banks must deliver higher levels of quality and service at competitive prices. Therefore, the study focused on the embracing of the mostly used platforms for banking within Kenya rural setting as the country's banking sector faces challenges amid the pandemic of COVID-19. By their very nature, banking platforms have been considered as new phenomenon among the less developed countries. Additionally, data has implicated that rural areas within most developing nations including

Kenya have been lagging technologically particularly in banking industry revolution (Ullah et al., 2021). Not surprisingly, bank's quest for banking platforms adoption continuous to be a challenge which entails a major change in the policy framework and external surrounding attainable from an envisioned insight in the banking services within Rural areas. In fact, emerging economies are being perceived to compute 80 percent of the global internet consumers rendering them with vast access to numerous banking platforms. At the same time, the general worldwide bandwidth of the entire rural areas in Africa has been perceived to be smaller compared to the São Paulo's City, Brazil (Campbell & Sellbum, 2016). Hence, it is undoubtable that a vital component of rural Africa's inhabitants lack vital benefits associated with banking platforms (Mäenpää, 2006).

1.1.1 Banking Platforms

Generally, the landscape of banking continuous to be evolving as indicated by the transition from traditional to ultra-modern concepts of banking. As such several banks have been forced to review their operational models with an intent of optimizing their customer's satisfaction in terms of end user experience and motivation. Several factors have been identified as areas of improvement, the most outstanding have induced convenience associated with the use of mobile banking, flexibility of use and the speed of banking, such factors have also contributed in the level of satisfaction attainable from the customers. Evolving expectation because of the changing world has similarly attracted a shift in customer relationships with banking institutions. Therefore, technology has contributed to prove its prevalence in the financial industry which is glued to service provision (Van der Boor, 2014).

Debatably, fintech adoption occurred in the early 1950s during the period in which credits cards and changing of money from traditional physical forms to an idea was initialized (Mills, 2018). Thereafter, the introduction of Automated Teller Machines (ATMs) occurred, this was preceded by the emergence of stock exchange market which initialized global and internet business models during the 1990s period. The period between 1950s and 1990s marked a vigorous technological advancement duration in which innovation highly prevailed within the banking sector. Such period also marked the emergence of money market which mainly relied on growing use of technology. Indeed, the epitome of modern banking has its traces in the innovative stage of technological banking.

The initialization of electronic platforms has significantly played a crucial role in banking provision. Such has enhanced both the convenience and effectiveness associated with banking in day to day activities, (Hway-Boon & Ming Yu, 2003). Recently, adoption of banking amenities has highly included both internal and external environments. While internal environment major focus has lied of effectiveness and efficiency in service delivery, the external environment has primarily ventured in optimization of customers experiences. Currently, commercial banks have majored in use of banking channels accessed with the help of mobile devices such as smartphones and 24 hour online accessed internet to provide financial services among their customers. Such channels have increased effective access of vital financial data as required by the customers in a more secure and convenient mechanism. Such transition has positively improved the end user experience within the banking sector as compared to the different historical accounts of banking (Mwangi, 2018). With the smartphones, the emergence of stronger symbiotic link between

technology and banking industry has rapidly skyrocket with its peak arrived during the onset of 21st century. Such platforms have also necessitated the exclusive banking services which have been availed on a click of a button.

British Education and Communications Technology Agency analysis (2014) points out major challenges associated with adoption of technology as inadequate ICT facilities, insufficient capacity development on ICT, low exploration capabilities and poor preparedness. Additionally, unavailability of effective model for appropriate information Communication and technology, existence of negative perception towards ICT studies, absence of confidence among learners, absence of individual change management capabilities, unavailability of technical, management and organizational support were pointed out. Arguably, the analysis further classified major challenges into components associated with skills, computer experience, training and personal elements embedded in one's lifestyle.

1.1.2 Banking Platforms in Rural Areas

The revolution in finance has perceived to not only emerging in London skyscrapers nor Beijing but also in rural Kenya (Irura & Munjiru, 2013). With the recent decline of profits, most tier one banks have invested heavily in reliable alternate channels as a strategy to reduce their operational costs. It has taken the individual bank effort to meet their customer needs and advance their system better to serve their clients (Central Bank of Kenya (CBK), 2018). The central purpose of every industry is to have consistent performance because firms realize that to advance and develop, there is a need for better performance.

Mauro, Hernandez and Mazzon (2007) notes that banking platforms come with the responsibility of the actions. It is upon firms to take action to witness increased performance in the market which means increased productivity. Since 2010, the banking sector has made strides towards greater financial inclusion by introducing efficient banking platforms. The financial performance of banking platforms estimation is computed using vital financials for example firm's return on investment, proceeds and performance in terms of sales within a designated time duration. Additionally, the estimation of the financial performance can be concluded through evaluation of the effectiveness and efficiency existing amongst reins which amount to cost minimization within an organization (Bharadwaj, 2018). Banking platforms' performance is an indicator of how well the firms are performing alongside their competitors. The assessment should be based on the quality of the products, share of the industry, and levels of profits for the company compared to others. As the evaluation is carried out, there is a need to ensure that the business uses appropriate strategies and is compliant with the law (Mills, 2018).

According to Kenya National Bureau of Statistics ((KNBS) (2016)), most Kenyan counties' mobile phone coverage rate was 85 percent in 2015 – get latest data from KNBS for 2020 – from Economic Survey 2021, indicating a more significant internet accessibility by given population has played a vital role in enhancing growth opportunities within banking and the sectors of telecommunication. Kimani (2019) asserts that internet financial services acts as the probable reprieve towards the rural component of the nation particularly in enhancing their capacity to access financial and credit products. Its eventuality has played a pivotal role in development of vital component of human capital within the population.

In his study, Otieno (2016) states that firms continuously gain from the developed and enhanced speed of service delivery, enhanced efficiency, accurate and reliable operation through the banking platforms. Customers experience has been largely improved since services have been introduced to numerous channels from which customers outreach has been vigorously increased. Similarly, a rise in outreach has directly been correlated to a rise in convenience associated with banking services since financial services can be finalized easily and in efficient manner.

1.1.3 Banking Platforms in Makueni County

Being a critical component of the study, the county of Makueni is found within the Eastern region of Kenya, it encompasses an estimate of 987,653 individuals as per the Kenyan census conducted in 2019. Environmentally, Makueni County forms both an arid and semi-arid ecology within the country. It has high prevalence to drought and is associated with lesser rainfall comparatively. In addition, the county's lower section lacks ability of human sustenance because of minimal rainfall as it cannot equitably sustain both growth of food and rearing of livestock (Kagio & Musembi, 2013). Recently, the local community within Kamba region is linked to agricultural value chain commodities with revenue generation, food security, and production, including local poultry farming, green grams, mango, and dairy cows. Recently, Makueni launched two processing plants, Kalamba - the mango processing plant, and Kikima dairy plant which, are in the manufacturing sector. The mango processing plant helps suppress post-harvest fruit waste by 40 percent, and the Kikima dairy plant can process and pack 6,600 liters in a day.

Statistics have indicated that at least one half of entire Kenya dwelling in abject poverty are in deep concentration among the rural setting. For instance, Makueni County has been critical of the same considering the preexisting environmental and sustaining factors (Kagio & Musembi, 2013). According to Kagio and Musembi (2013) unbanked individuals mainly use their devices to access financial services with less attractive cost. They are also highly bankable under basic transactional functions which tend to be accessible within lower cost using mobile devices. According to Anyasi and Otubu (2009), lack of financial and credit access tends to deter investments in farm equipment from increasing production, investment in health care and education, start micro enterprises, or seek far effective benefits for the highly marginalized group often society in rural setting. In addition, formal monetary exchanges require a physical or a geographical location. Technology has been instrumental in promotion of growth and development within Makueni County considering its infrastructure- constrained nature.

Banking platforms have revolutionized the way Makueni County residents perform their financial services. As opposed to historical trends the customers are no longer to strain in the unending long queue to facilitate their services and instead able to access them using portable devices. Such has been instrumental in minimization of walk around that has resulting budget constraint. Banks such as Kenya Commercial Bank (KCB), Equity, and Cooperative have mobile applications available for the banked Makueni residents. This software app has instrumentally enhanced security features thus safeguarding vital user's credentials, since users must provide their passwords before any transaction can be authenticated. These banking platforms have improved financial safety of Makueni County

residents since their inception. Mobile service providers have platforms offering numerous benefits to Small and Medium Enterprises (SMEs), such as checking account balances, money transfer, bill payment, and cash collection, ultimately reducing transaction costs and establish greater control and flexibility over bank accounts.

1.2 Problem Statement

Globally there has been a remarkable advancement in adopting new platforms for banking in the last ten years (Luo et al., 2010). This accomplishment is credited to the nature of accessibility and convenience among the middle and low-income component of the population (Ozili, 2020). A mobile banking channels have been associated with ease of use and efficiency which is attributed to the manner of service delivery amongst the probable users. Also, the existence of credit and accessibility amongst the unbanked users has highly improved the effectiveness of mobile banking (Van der Boor, 2014).

A rise in digitalization has resulted in emergence of digital banking which has contributed to shutting down of major banks in areas such as Europe. Furthermore, recent health crisis highly attracted the use of digital platforms for banking away from a historical perception thus forcing customers to use mobile devices for banking series. Months ago, Europe was greatly affected as it has seen up to one thousand bank branches being closed due to digital migration of banking services (Kien et al., 2020). Furthermore, the emergence of COVID-19 resulted in laying out of restrictions and sanctions which compelled the individuals to digital banking avenues (Green, 2020).

In Africa, a rapid development has been realized especially in the field of formal financial services. Despite, of the transitioned development only 43.7 percent of the population remains with adequate access to formal banking services. Comparatively, 21.3 percent of the population in rural has limited access banking platforms, being a significant contributor to this growth (Golait, 2009). According to Yoo et al. (2018), the digital banking space has accelerated over the years. An example is the Mshwari launch which saw numerous innovations in platforms offering similar services to the Kenyan population. Besides the M-Shwari platform, many commercial banks across Africa are adopting banking platforms to enhance the delivery of services, hence minimizing the costs of operations in terms of paper works and the time consumed by clients visiting their bankers (Kimani, 2018).

The ICT survey by Kenya National Bureau of Statistics (2016), indicated that 28.4 percent of financial services users in different sub-counties in Kenya consume mobile financial credit as opposed to the entire country's estimate of 39.6 percent that use mobile banking and have access to credit. The 2019 Report by KNBS was indicative of financial transformation from 2006 had a rise of up to 82.9 percent. Also, the report indicated that formal financial exclusion had decreased to 11 percent from the initial count of 43 percent in the year 2006. The shift was largely associated with shift in payments which was occasioned by the emergence of COVID19 pandemic which advocated online payment and use of digital payment platforms (Tut, 2023).

Numerous analysis has been provided in relation to mobile banking influence in banking services. For instance, Musara (2016) focused on analysis of whether advancement in

technology had a subsequent improvement in efficiency and cost minimization among banking channels. Also, Murega (2018) conducted a divergent study on the link between financial inclusion and mobile money within Kenya. His findings implicated that rise in the number of mobile banking subscribers played an instrumental role in a remarkable rise realized within the digital financial and banking in Kenya.

A study by Kimingi (2010) further posited that from 2010 unparalleled competition has occurred among the banking instruction because of emerging innovation and evolution in digital fiancé. Mobile phones for instance played a major role in directed the evolution hence profitability in the banking and its shift to digitalization. Despite of the studies conducted less insights has done to on banking platforms in the rural setting. Rural inhabitants remain to have a comparatively minimal access to financial and digital banking services (Rahman, 2016). According to Makueni County Statistical Abstract (2020), the county boasts of 137 Savings and Credit Co-operatives (SACCOs) compared to 15 commercial banks present as at 2019. Propelled by this knowledge gap, this study sought to address this concern by responding to the research questions on what challenges the rural population face in the adoption of banking platforms and which factors influence its adoption in Kenya particularly in Makueni County.

1.3 Objectives of the Study

The study aimed at assessing the uptake of alternative banking platforms in the rural setting in Makueni County whereas the specific objectives included:

- (i) Establish the extent of adoption levels of banking platforms in Makueni County.

- (ii) Determine the factors that influence the uptake of banking platforms in Makueni County.
- (iii) Determine the most suitable banking platform for Makueni County residents.

1.4 Value of the Study

The research was of importance to stakeholders in banking sector. The findings helped them strategize on adopting suitable methods to penetrate the rural market segment, giving them a competitive edge. Adopting such practices helped them reduce costs associated with traditional banking methods, which are more expensive, leading to improved performance of these institutions. In addition, the government used the information to set up regulations in the information and technology sector and develop physical infrastructures such as power installations and cyber optic cables for e-commerce. The study provided a theoretical and empirical framework for research in banking platforms in rural settings and enrich the existing literature.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section avails a series of reviews on the researcher's literature that are inclined the uptake and adoption of banking platforms in a rural setting. Theoretical and empirical literature were reviewed by evaluating the various concepts, theories and empirical studies on banking platforms, especially in rural areas. The empirical literature assessment analyzed historical accounts to avail information which facilitated identification of field study subject. Moreover, a summation of literature review and conceptual framework was availed.

2.2 Theoretical Perspective

This study is founded on TAM and the TAL model, which explain the factors that determine innovation's uptake, including complexity, relative advantage and compatibility. Some of the models on banking platform include TAM by Davis (1989) and TAL model by Rogers (1962). In addition, there are several theories on banking platform. To begin with, the theory of innovation diffusion (IDT) by Rogers (1962). Secondly, Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1980), the Theory of Planned Behavior (TPB) by Ajzen (1985) and Theory of Perceived Risk (TPR) by Featherman and Pavlou (2003). This study is anchored on both TAM and TAL model.

2.2.1 Technology Acceptance Model

This model was developed by Davis (1989), it entails a hypothetical ideal describing how human embrace and utilize technological innovation. In his study Davis (1989) points out

the model can acutely foresee both rejection and acceptance of technological innovation. Additionally, he articulated ease of use perception as vital contributor which leads to adoption and intention of use. The perceived practicality implies usability associated with user's interaction with technology. Similarly, perceived ease entails degree and tendency for people to effectively use the technology with minimum effort. The TAM has widely been adopted and validated and has the capability of modification with the help of other constructs (Yousafzai, Foxall & Pallister, 2017). The TAM indicates that various factors influence the end-user judgment on the manner and time they will utilize an innovation when it is availed (Venkatesh & Bala, 2008). Also, Davis (1989) postulated that perceived ease of use and effectiveness are important in realizing the intention of new users on innovation.

Since its inception in 1980s, TAM has largely been practiced in educational setup while disclosing decisions of uptake and innovations accessibility (Omwansa et al., 2012). Perceived usefulness is redefined as the deemed benefit to the consumer. Hence, to advance from intentional use of the mobile service and the consumer needs to use such service. In accordance with Venkatesh and Davis (2000), individual's decision to utilize innovation is influenced by TAM's distinct ideals, which are perceived usefulness and convenience. In addition, in line to TAM, perceived effectiveness is affected by perception associated with operability in technology (Venkatesh, 2014). The TAM and its application formed the key component for most research publications.

The TAM has evolved into an influential theory that entails the precursors of inventions use through beliefs related with supposed usefulness and system usability (Yousafzai, Foxall & Pallister, 2017). A preceding analysis showed that TAM avails an enhanced variance in technological innovation use as contrasted to reasoned action theory, decomposed theory of planned behavior (Lee, Kozar & Larsen, 2013). As a result, TAM was adopted to provide an insight into consumers' adoption of technology in banking platforms for simplicity and accessibility to financial services. The TAM appropriateness lies in the specific constructs of preconceived effectiveness and usability ease, which affects individual's adoption of innovation platforms within mobile banking.

2.2.2 Technology Adoption Lifecycle Model

A study conducted by Rogers (2003), indicated that mobile banking platform implementation can be investigated based on technology adoption life cycle model, that articulates how emerging beliefs and technical elements are culturally spread. Arguably, the e adoption cycle includes; refining conditions of technology, the initial testing stage, acceptance or rejection stage and continued use stage. Generally, diffusion of innovation is elementally achieved across the key stages.

Innovation adopters formed the greater role of the risk takers who are interested in trying out newer ideas (Teece, 2019). While initial large component of the population accepts innovation but requires first perception prior to adoption the later majority comprising of consumers is often unsure of the inventions and only use it once tested exhaustively. Further, the remaining components of laggards remain glued to traditionalist approach as

a result have tendency so evading innovation and to some degree ignore its applicability (Rogers, 2003).

Technology adoption life cycle model lies within the demesne of banking platforms uptake and it entails the crucial phases that an individual adopts a technological innovation for example mobile banking, its acceptance, and ultimate usability (Saunders, 2014). The intermediation in financial aspects is explained as mechanism where financial actors such as institutions and Mobile Network Operators accumulate funds arising from the net savers that facilitate acquisition of financial assets through the partaking of transactions and components of financial services such as banking platforms. This entails the transmission of financial resources from lenders to net borrowers (Organization for Economic Co-operation and Development (OECD), 2016). Githundi (2015) noted that developing generalized financial commodities entails highly cost-effective interventions within the financial arbitrators. Normally, the cost example includes direct and opportunity costs. Informational gaps between sellers and buyers are uniquely apparent in financial markets and majorly, consumer's awareness of own safety, and lenders sincerity.

The technology adoption life cycle model addresses a vital and unanswered query regarding dynamics of innovation (Abor, 2014). Arguably, what is the degree that a firm influence the evolution in innovation? For example, to what degree can a bank guide its design to an industry-standard or dominant design? Rogers (2003) argues that this is dependent on the extent of technological uncertainty, that determined by complexity of the technology evolution phase. Moore (2004) focused on the technology adoption theory

especially on its life cycle. Banks are challenged on making the transition from the visionaries to the pragmatists. Since, several high technology innovations that manage to attain early market support falter beyond this phase and end up being chasm. Additionally, Moore (2004) conservatively portends that the solution to crossing the chasm rests in adoption of the technology to tailor products to specific market need.

2.3 Adoption Levels of Banking Platforms in Makueni County

According to a report published by Makueni County Government, Department of Finance and Socio-Economic Planning, the number of commercial banks in the region has increased to 15 in 2019 from four in 2018 (Government of Makueni County, 2020). The report further outlined an increase in SACCOs to 137 in 2019 compared to 83 in the previous year. From this study, the people of Makueni have cultivated a saving culture with the rise of SACCOs in the region.

Perhaps, the International Telecommunications Union (2005) article indicates a rise in mobile banking uptake due to establishment of handsets. Such have been seen as major contributors to financial credit. With the 2019 census, the report showed that there was a 19.8 percent increase in the number of youth and 27.6 percent increase in the active labor force since 2009. With a population of 0.9m, an increase of financial institutions in the region was a boost towards increasing the financial literacy and awareness of banking products for the residents in Makueni.

With a total square kilometer of 8,176.7, the area categorized as urban in the region is only 31.5 square kilometers. This number clearly indicates that most of the area in Makueni inhabited is in the rural areas and hence the need and use of banking platforms that would help reach as many residents as possible and reduce the costs associated with transacting in far physical banks. The Makueni County government established a Fund-Tetheka Fund whose main objective was to provide access to capital and financing facilities (Government of Makueni County, 2020). The fund was founded on the SMEs development programmes are likely to have the biggest influence on reducing youth unemployment, create livelihood opportunities and stimulate economic development in Makueni. This study analyzed the extent of adoption of the banking platforms that the residents have been utilizing and their availability to the rural people.

2.4 Adoption of Alternate Banking Platforms

Business environment has undergone transformation which have significantly improved its operation. For instance, internal and external environment of company highly influence the manner in which company develop and attain enabling operational capabilities. External environment has had significant impact on business operation by determining business continuity and termination (Shatilo, 2019). Business environment mainly contribute towards operational decisions, management and overall performance. For instance, innovation has been mainly associated with improved performance, however, lack of which has been directly linked to poor performance (Genç & Şengül, 2015). The most effective stage in innovations is first identification of business environment mainly affected by strategic management within which innovation can be targeted.

Moreover, since external and internal environment component impact numerous features of the company such as innovation. Hence company should increase its ability to conform with external environment so as to enhance its internal structure to minimize the resultant threats (Kipsoi et al., 2012). A study conducted by Bharadwaj (2000) asserted an increasingly dynamic environment that is attributed to external environment. Most of the factors have been perceived to be beyond business's control thus inflicting adverse impacts into the actual operational capabilities of the business. Therefore, to overcome extreme impacts strategic response plays a critical role, such is attainable from effective objectives formulated within the firm, (Crittenden et al., 2017). Additionally, Aslam and Sarwar (2010) establishes that when firm's see the economic environment as turbulent, they respond to align with the environment.

One of the determinants of the adoption and uptake of alternate banking platforms is a relative advantage and it refers to the manner in which technical innovations have been perceived effective as compared to the predecessor mechanism (Moore & Benbasat, 1991). A comparative benefit has been associated with enhanced effectiveness and efficiency which contribute to economic importance (Dahlman & Utz, 2005). Al-Jabri and Sohail (2012) analyzed features contributing to uptake of financial services within Saudi Arabia, in their study it was found out that relative advantage highly influenced mobile banking. Sheth et al. (2011) carried out a study on factors influencing the uptake of mobile banking in Saudi Arabia and the study revealed that relative advantage is one of the key factors influencing mobile banking uptake.

Additionally, the perceived risk forms a subsequent determinant of the adoption of alternate banking platforms, refers to the security fears a client must overcome to subscribe to a mobile banking service (Van & Cavaye, 2019). Arguably, the perception of customers on the risks emerge as a result of doubt attributed to variation in consistency between customer's anticipation and actual innovation. According to (Koenig-Lewis et al. 2015) the variation contributes to losses realized as technology fails to satisfy the anticipated objective.

The last determinant in adaption and utilization of alternate banking channels is the observability associated with the platforms. Arguably, observability entails visibility associated with alternate mobile banking platforms within the social systems in place (Lewis, 2018). Based on mobile banking context observability entails accessibility and associated with convenience. Also, observability encompasses exposure associated with mobile banking which enhances consumer's awareness of the same within the available social platforms.

2.5 Most Suitable Banking Platform for Makueni County

The most critical barrier formed against successful adoption of banking platforms is attributed challenges within communication and information components within the nation. A study by Cunningham and Gerrard (2003), indicated that the correlation between adopted ideas and customers believe and innovation capability to meet customers' needs play key role in adoption of the innovation. Similarly, amenities barriers have posed a key challenge in adoption of innovation amongst nations. Development of information and technology have subsequently posed a risk on the banking sector, while some risks have

considered to be low others remain highly inflexible. A study by Chuang (2012) pointed out that privacy and security were major demoralizing factors which affected customer's interactions with innovations. Also, Chitura (2018) maintained that technological vulnerability linked with risks and malwares such as virus attack, network related vulnerabilities and assisted damages have further threatened efficacy of innovation. Risks associated with operation have directly impacted credibility of banking systems since banks have failed to upgrade internal management of processes. Further, Giglio (2015) elucidated that legal risk has majorly enhanced uncertainties within the laws in relation to existing technology thus impacting innovation.

Conceivably, cultural reluctance has acted as an impending challenge within banking platforms. Such has been considered as major interference of business remotely, it has also been associated with a reduction in exposing vital information necessary for customers to enhance their banking experience (Kuisma, Laukkanen & Hiltunen, 2017). Although numerous studies have indicated effects of educational levels have a relatable impact on acceptability of banking uptakes. Low educational levels still act as barriers to uptake of banking services (Yuan, 2017). Therefore, inadequate education hinders individual's capability to adopt and embrace online banking services.

Considerably, complication in online banking platforms have highly discouraged customers usage of the banking services resulting in dissatisfaction (Henning Kagermann et al., 2012). Complication result in lack of preference for the subsequent use of such platforms. As a result, mobile banking associated with ease of use and accessibility stands

out as the vital approach and highly suitable banking platform for the residents in rural dwelling (Kolodinsky et al., 2004). Similarly, the need fulfilling method stands a better chance of winning and convincing customers into the use within the locality.

2.6 Empirical Review

Suoranta (2003) carried out a study in Finland conceptualizing several features and modeling the link study variables in the mobile banking uptake framework. The study adopted the use of a descriptive design while empirical data was collected with the help of well-designed questionnaire. The findings revealed that vital aspects such as compatibility, the associated relative advantage and communication highly enhanced usage of mobile banking. Also, the perception of technological elements on population features contributed to the consumer use and adoption of mobile banking (Kumat et al., 2008).

Secondly, Ching-Mun, Aik, Sim, Kam, and Boon (2011) analyzed elements affecting uptake of mobile banking within the region of Malaysia. Objectively, the study aimed at the analysis of acceptability of mobile banking within Malaysia. The findings identified that the perceived ease of use and importance associated with mobile banking contributed towards consumer's intentions with adoption of mobile banking. Moreover, it was identified that the risk perception contributed to customer's behaviors on adoption of the banking services within Malaysia.

Further, Al-Jabri and Sohail (2012) conducted a study on uptake associated with mobile banking within Saudi Arabia. The aim of the study was to analyses the manner in which

diffusion theory as postulated by Rodger was applied in mobile banking usability. It adopted the relative advantage complexity technique, observation and friability and the risk associated with the theory in mobile banking. The findings indicated that completion and advancement in technical fields highly increased banks needs for innovation (Githundi, 2015). Also, it revealed that a heavy investment was made on technology as a result of rising demand on digitalized banking platforms.

Nevertheless, Humphrey, Willeson, Bergendahl, and Lindblon (2016) in their study cited that telephone banking, ATMs and online money form the basis of vital innovations affecting banking circulation scheme which significantly influence banking operations (Kibet, 2021). Research on individual acceptance and use of mobile banking has always considered mobile banking as technological innovation (Al-Jabri & Sohail, 2012). The study found that those costs of services and security concerns influence the use of mobile banking. In contrast, demographic factors such as age and education were found not to influence mobile banking. However, satisfaction in other studies emerges as the single most used measure of uptake (Delone & Mclean, 2003).

Raza and Hanif (2013) analyzed the perceived importance, usage, and satisfaction for the acceptance of mobile financial services. The analysis discovered that satisfaction had a high degree of face validity. It further revealed that it was hard to deny the success of a system where users say that they like it and most clients subscribe to innovation when they perceive it as essential. Innovation is said to be satisfying if it meets the perceived needs of a user, and a satisfied user often use innovation more and is more likely to recommend

the innovation to friends and family. Additionally, Korir (2022) in his study analyzed aspects which impact mobile banking within Kenya. The research was carried out at KCB a Bank located in Garissa. The research revealed that the cost of M-banking services and security concerns influences manner in which customers adopt and utilize mobile financial services while demographic factors such as education and age did not influence mobile banking.

Currently, rural population consistently maintains savings and borrowing to effectively achieve several business objectives. Several Kenyans have been unable to effectively create banking accounts as a result of high deposits requisite. As a result, banking organization can effectively have adopted use of mobile banking to conduct inroads which would effectively avail banking services to the rural population at minimal cost.

According to Ngugi et al. (2010) customers feared the instances in which their savings end up lost. For instance, supposed the funds being transferred to other users fail to reach to the end points which mechanism would be adopted to facilitate a return. In fact, in the case of south Africa it was evaluated that 6 out of 33 individuals while in Philippines 7 out of the possible 30 individuals were found to be worried based on issues related with refunds and money lost during systems transfers. Contrarily, Kenyan M-Pesa customers have continuously enhanced their trust with the platform as it has provided an avenue from which reversal can be made. For instance, Kenyans don not have to worry about lost money as the same can be traced and reversed successfully. Additionally, Safaricom which also

forms the major service provider on M-Pesa have conducted massive advertisement that has enhanced continued trust amongst its customers with their mobile banking services.

2.7 Summary of the Literature Review

The literature review has provided sufficient evidence of studies on adoption and uptake of alternative banking platforms which were conducted in a conclusive manner. However, most of the studies have concentrated in developed countries, which operate and face different challenges to those in Kenya, but the basis to look at uptake and adoption of banking platforms in a rural setting. Hence, this study identified research gap, particularly the one pertinent to the people living in rural areas. Table 1 below summarises the empirical literature review.

Table 1 Summary of Empirical Review

Author(s)	Study Topic	Objectives	Methodology	Findings
Ching-Mun et al. (2011)	Features contributing to the uptake of mobile banking within Malaysia	Investigate mobile banking acceptance in Malaysia	Questionnaire was adopted to collect empirical data.	There was a considerable importance associated with mobile banking uses. There was a considered ease associated with the use of mobile banking. Associated risk contributed adoption and use of mobile banking.
Al-Jabir, and Sohail (2012)	Analysis of Mobile Banking Adoption Application of DIT (diffusion of innovation theory)	Examine potential facilitators and inhibitors of mobile banking adoption	The research adopted the theory of diffusion of innovation as base line.	Major contributor to adoption of innovation was competition, there was need for adoption of innovation by banks.
Korir (2012)	Factors influencing mobile banking in Kenya.	Analyze factors influencing uptake of mobile banking	Used multiple regressions model to analyze the collected data.	Costs of m-banking services and security concerns influence the use of mobile banking.
Tiwari et al. (2006)	The Impact of Mobile Technologies on Consumer Behavior and Its Implications for Bank	Carry out a valuation of existing opportunities in the sector of banking.	Descriptive research design	Specific attributes of innovation in mobile banking contributed to adoption and usage among customers.
Raza and Hanif (2011)	Key Factors affecting internet banking adoption among internal and external customers: A case of Pakistan	Establish the impact of innovation on customer satisfaction	Regression analytical model for data analysis	Satisfaction had a high degree of face validity

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section provided a description of the study methodology while clearly elucidating the adopted the research design. Further, the population, the sampling design and sample size. In addition, it explained the data collection methods, operationalization of variables used and methodology adopted for the analysis of data.

3.2 Research Design

In this study, descriptive design was adopted. This design highly focused on providing a target population description while availing vital features of the population as per the observed variables. Descriptive research was concerned with describing the data and characteristics of the population. Objectively, the design facilitated the attainment of adequate facts and reliable data for statistical calculations. The study also involved data collection to facilitate answering vital research questions (Mugenda & Mugenda, 2008).

3.3 Target Population

Arguably, target population is an instrumental element of the study and entails the population form which the data to be used in the study is obtained (Kothari, 2004). According to Kombo and Tromp (2003) population entails individuals, a group or items which are used to develop a sample size to be used in the study. This study, therefore, adopted a finite number of residents from Makueni County and they were selected from the nine sub-counties, which are Makueni, Mbooni East, Mbooni West, Kathonzweni, Kilungu, Makindu, Nzau, Mukaa and Kibwezi using the records of Kenya National Bureau

of Statistics (2020). This enhanced the researcher's target population of 100 residents. The target population of study was composed of adult residents from Makueni County who had bank accounts.

3.4 Sampling Design and Sample Size

Sample size effectiveness lies in its ability to signify vital features of the entire population representatively. Efficacy of the sample relied on its ability to represent entire population of Makueni County comprising of 987,653 residents. For instance, it facilitates attainment of the study objectives (Fink, 2003). According to (Cooper & Shindler, 2006), the sample size implies a subset of the entire population which then takes part in the actual study. In addition, an acceptable sample size should be at least between 10 to 30 percent of the entire target population so that the results from the study analysis fulfill the two conditions of reliability and validity.

The goal was to facilitate selection of the sample from the population so that the items are equitably selected from the group and hence are homogeneous. Yaro Yamane's formula (1967), as used by Khong (2015), was used in this study to determine the sample size. At 90 percent level of confidence (level of precision = 0.1), the sample size was determined as follows $n = N / (1 + N(e)^2)$, where n is sample size; N is population; and e is level of precision. Then, $n = 987,653 / (1 + 987,653 (0.1)^2)$, which was equal to 100. Table 2 below shows sub-county target population out of which corresponding sample size was proportionately selected.

Table 2 Sub-County Population and Proportionate Sample Size

Sub-County	Target Population	Sample Size
Kathonzweni	79,780	8
Kibwezi	197,000	20
Kilungu	60,952	6
Makindu	84,946	9
Makueni	130,375	13
Mbooni east	97,756	10
Mbooni west	102,594	10
Mukaa	107,549	11
Nzau	126,701	13
Total	987,653	100

3.5 Operationalization of Variables

The study's independent variables included perceived risk, relative advantage, complexity and observability. The dependent variable was identified as the uptake of alternative banking platforms. The indicators of relative advantage, complexity, perceived risk, and observability used Likert scale – see Table 3 below

Table 3 Operationalization of Study Variables

Objectives	Indicators	Measurement	Data Analysis
Establish the extent of adoption levels of banking platforms in Makueni County	<ul style="list-style-type: none"> • Relative advantage • Perceived risk 	Likert scale	Descriptive statistics
Determine the factors that influence the adoption of banking platforms in Makueni County	<ul style="list-style-type: none"> • Observability • Perceived risk • Complexity • Compatibility • Relative advantage 	Likert scale	Descriptive statistics
Determining the most suitable banking platform for Makueni County	<ul style="list-style-type: none"> • Inefficient at complex transactions. • Lack of relationship with personal banker. • Technology issues. • Security issues • Lack of relationship with personal banker. • Customer preferences 	Likert scale	Descriptive statistics

3.6 Data Collection

According to Saunders (2000), questionnaire is considered as an effective tool considering its structure and component. The use of predetermined questions primarily formed the basis of the questionnaire. Usability of questionnaire is highly considered due to its inexpensive nature. Also, its reliability and validity features highly make its use considerable.

The study adopted the use of semi structured questionnaires which facilitated data collection. Both close and open ended questions were factored in to collecting data from the participants. Entire sample size selected was availed with an equal chance to participate in answering of the questionnaire. Further, the questions that mainly were close ended were aligned with the respective sections while open ended were availed a platform where individualized comments were got.

3.7 Data Analysis

Analysis entailed looking at the insight while identifying relationship between the observable variables to clearly facilitate findings. Analysis facilitates identification of underlying assumptions as per the postulated research objectives and question (Kombo & Tromp 2003). Moreover, quantitative data was sorted, organized, arranged, and analyzed using descriptive statistics and the results were presented in tables.

3.8 Ethical Considerations

This study maintained vital component of ethical standards before actual collection of data. For instance, the researcher elucidated the purpose and intent of the study. Secondly, the researcher sought relevant authority's license to facilitate collection of the identified data

with utmost integrity. Furthermore, participant vital data was excluded from the study to ensure protection of the respondents as per the ethical guide. Verbal consent formed the priority as its attainment marked the start of the filing of questionnaires. Finally, willingness to participate was maintained at higher degree as the respondents who failed to take part were exempted from the study.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1. Demographic and Socio-Economic Characteristics

This section illustrates the socio-demographic characteristics of the respondents that participated in the study based on aspects such as sex, age, education, and income. It is important to understand respondents' demographic and socio-economic characteristics as these influence decisions, choices and adoption.

4.2 Socio-Demographics Characteristics of the Respondents

The participants were asked to indicate their gender and their feedback was collected as indicated in Table 4 below. According to Table 4 below, majority of respondents were male (52.4 percent) while female respondents constituted 47.6 percent. Arguably, the study considered gender as an important attribute of the population, which was used to measure the distribution of banking services across the population and its adoption between individuals of different genders. Generally, age was a vital phenomenon used to explain the likelihood and usability of banking platforms within the community. For instance, age consideration helped ascertain the degree of the use of banking platforms among individuals under different age groups. The feedback gathered was analyzed in Table 4 below.

According to the survey output, it was found that the majority of the survey respondents (37.9 percent) were between the age of 36 and 45 years. Additionally, 32 percent encompassed individuals aged 18 to 35, while the remaining 26 percent were aged 46 to 55 years. Arguably, the study sample was effectively distributed based on the age group,

an indication of a considerable representation of the entire population using the banking platforms.

Education is a key determinant of an individual's lifestyle and status in society. Studies have consistently shown that educational attainment has a strong effect on attitudes toward the adoption and use of banking platforms. The results are stipulated in Table 4 below and the results indicated that almost half of the respondents (47.6 percent) had attained college as the highest education level, while 5.8 percent had a primary level of education. In addition, 34.0 percent had attained secondary education. More than a third (50 percent) of the respondents were individuals with either college or secondary education. This implied an adequate understanding of the banking platforms, mainly associated with improved learning as a function of education.

Table 4 Summary of Social-Demographics of the Respondents

Variable	Socio-Demographic	Frequency	Percent
Gender	Female	49	47.6
	Male	54	52.4
Age (years)	18-35	33	32.0
	36-45	39	37.9
	46-55	27	26.2
	55-65	4	3.9
Highest level of education	Primary School	6	5.8
	Secondary School	35	34.0
	College	48	47.6
	University	13	11.7
	Post-Graduate	1	1.0
Main sources of income	Formal employment	67	66.0
	Casual worker	69	68.0
	Sale of livestock products	70	68.9
	Sale of crop produce	72	70.9
	Others	51	50.2

The aim of evaluating the respondent's levels of income was to analyse the major sources of income. The feedback regarding main source of income was collected and the results

presented in Table 4 above. Most of the respondent's income sources were everyday work and formal employment, accounting for more than a third of each sample area. However, respondents also identified the existence of other sources of income.

4.3 Adoption Levels of Banking Platforms in Makueni County

The aim of this section was to evaluate the levels of adoption of mobile banking. The participants were interviewed and their findings presented in Table 5 below.

Table 5 Adoption Levels of Banking Platforms in Makueni County

Accounts	Description	Frequency	Percent
Number of accounts	1	47	46.6
	2	35	34.0
	3	14	13.6
	4	3	2.9
	More than 5	3	2.9
Type of account	Current	29	28.2
	Savings	8	7.8
	Both	66	64.1
Awareness of alternate bank channel	Yes	98	95
	No	5	5
Enrollment of banking channels	Description	Cumulative Frequency	Percent
	Automated teller machine	62	60
	Mobile banking	93	90
	Internet banking	83	80
	Agency banking	73	70
	All	52	50
Knowledge of alternate banking channels	Bank marketing agents	84	88.3
	Social media	97	96.1
	Print media (newspapers)	103	100
	Electronic media (radio/television)	99	98.1
	Peers	92	91.3
	Others	103	100
Distance to nearest financial institution	Below 100 metres	4	3.9
	100 to 500 metres	16	15.5
	500 metres to -1 kilometre	10	9.7
	1 to 10 kilometres	38	37.9
	Above 10 kilometres	34	33.0

From Table 5 above, all the respondents (103) interviewed had bank accounts, with the majority (46.6 percent) having at least having one banking account. Over a third (35.5 percent) had two bank accounts. The aim of this was to evaluate the levels of adoption of mobile banking based on the outlined elements. In addition, the participants were asked to indicate the type of the bank account in possession. As Table 5 above shows, most of the respondents (64.1 percent) had both current and savings accounts. About 28.25 of the total respondents suggested having a current account, while only 7.8 said they had a savings account only. Generally, the ideal of the study pointed out the efficacy of both types of accounts as supported by the feedback attained. The study aimed at analyzing the awareness of customers on the existence of alternate banking channels.

On awareness, 98 percent, were aware of banking channels in their bank. Only 2 percent of the entire population suggested unawareness. This pointed to the existence of alternate banking and its spread to the region's wider region under study. Furthermore, the research aimed at analyzing the enrolment within the banking channels and the feedback was as indicated in Table 5 above. Generally, the feedback pointed out striking inferences; for instance, most of the respondents were found to be enrolled in mobile banking and ATM. Arguably, mobile banking had over 90 percent enrolment levels, while ATMs had over 60 percent enrolments within the locality of the study. Such inferences outlined the high consumption of internet banking channels followed by larger use of ATMs, which have increasingly enhanced efficiency in the banking sector (Hernandez & Mazzon, 2007). The study aimed at understanding the main source of the knowledge of alternate banking channels.

According to the findings, the respondents unanimously pointed out that they learned about the alternate banking channels through bank marketing agents and social media. Similarly, peers were identified as the alternate source of information, and public meetings were equally considered pivotal in creating awareness. Such findings agreed with the efficacy of social media and agency within financial platforms. For instance, agents were seen to be highly impactful in improving consumer knowledge of banking platforms and products offered within the platforms. At the same time, the internet played a vital form of information as critical information regarding the banks was well elaborated within various advertising platforms.

From Table 5 above, the respondents' feedback indicated that more than a third of the respondents had the nearest financial institution between 1 kilometre to 10 kilometres and above 10 kilometres. Similarly, 33 percent had above 10 kilometres while the remaining had below 1 kilometres of distance. Such response manifests the proximity of the distances towards the customers' residences. However, a reasonable proportionate of the study sample indicated that a relatively far distance hindered their access to the financial institutions, as shown by the number suggested above 10 kilometre travel to the finance institutions

4.4 Factors that Influence the Uptake of Banking Platforms in Makueni County

This section analysed the factor influencing the uptake of banking platforms in Makueni County. The results are shown in Table 6 below.

Table 6 Knowledge of Financial Institution (Percent)

Knowledge	Kathonzweni	Kibwezi	Makindu	Kilungu	Mukaa	Nzaui	Makueni	Mbooni East	Mbooni West
Bank marketing agents	16.0	30.2	16.7	50.0	40.0	42.9	26.8	63.6	50.0
Social media	20.0	25.6	22.2	28.6	30.0	28.6	26.8	36.4	12.5
Print media (newspapers)	8.0	14.0	22.2	0.0	0.0	7.1	17.1	0.0	0.0
Electronic media (radio/television)	8.0	4.7	13.9	14.3	20.0	3.6	14.6	0.0	0.0
Peers	36.0	20.9	22.2	7.1	10.0	14.3	12.2	0.0	25.0
Public meetings	12.0	4.7	2.8	0.0	0.0	3.6	2.4	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
Sample size	25	43	36	14	10	28	41	11	8

As Table 6 above shows, more than half of the respondents knew about alternate banking channels through bank marketing agents and social media. Furthermore, social media and peers were equally considered to be impactful in the creation of individual awareness about the existence of financial institutions. However, electronic media was considered insignificant as the feedback indicated a smaller impact on the contributions to awareness. Additionally, the study aimed at analysis of the respondent's enrollment to the alternate banking channels. The findings showed that most respondents (98.1 percent) had enrolled in alternate banking channels, while only 1.9 percent indicated otherwise. Such implications show a positive trend in alternative banking and customer enrolment within the study locality.

On the set-up process, the respondent's feedback was evaluated and the results are as indicated in the Table 7 below.

Table 7 Set-up Process (Percent)

Set-up	Frequency	Percent
Very easy	21	20.8
Moderately easy	51	49.6
Easy	31	29.7
Sample size	103	100

According to the analyzed data, almost half of the respondents (49.6 percent) reported that the setup process of the alternate banking options was moderately easy. Similarly, the remaining proportion indicated that it was very easy accounting for (20.8 percent) and easily accounting for (29.7 percent) of the entire population. The indications implied general ease of use within the setup process, which motivated enrolments.

The respondents were also requested to give their perception of the duration it takes to set up and the results were tabulated as in Table 8 below.

Table 8 Duration of Set-up Process (Percent)

Duration	Frequency	Percent
One hour or less	86	85.1
2 to 5 hours	2	2.0
5 to 12 hours	5	4.0
3 days	6	5.9
Beyond 1 week	6	5.9
Sample size	103	100

The results indicated that more than half of the respondents (85.1 percent) reported that setting up a banking option takes one hour or less. However, the longer durations were also evaluated, mainly associated with technicalities within the systems and system downtime during the setup process.

The study participants were requested to rate their understanding in relation to the factors which hinder adoption and uptake of alternative banking options. The feedback was collected and the results presented in Table 9 below.

Table 9 Factors that Hinder Adoption and Uptake of Alternate Banking Options (Percent)

Factors	Very Low	Low	Moderate	High	Very High
Lack of technological expertise	2.9	34.1	45.6	12.6	7.8
Unawareness of existence of options	1	22.3	62.1	13.6	1
Lack of internet access	1	23.3	56.3	15.5	3.9
Lack of smart phone device	1	13.7	63.7	20.6	1
Channel unavailability	0	24.6	57.8	12.7	7.8
Lack of trust	0	37	54	9	0
Complex system processes	1	15	72	11	1
High operating costs	0	8.8	40.2	49	2
Fear of fraud	2	29.7	30.7	30.7	6.9
No interest	3	4	26.7	34.7	34.7

Arguably, on lack of technological expertise, the respondent's feedback indicated that 45.6 percent were moderate while 34.1 percent indicated low. This implication suggests there was less technological hindrance to the uptake of alternate banking. Similarly, responses suggested that awareness of the alternate banking options was an instrumental factor that hindered the adoption of alternate banking options. This was supported by over 75 percent of the respondents, which indicated a moderate, high, and very high degree of impact. Additionally, on a statement that lack of internet to use some of the banking as a factor hindered the uptake of alternate banking, the respondent's agreement was maintained at over 70 percent, implying that internet connectivity significantly impacted the uptake of alternative banking options. Furthermore, respondents suggested that the lack of smartphones hindered their uptake of alternate banking options and this was supported by 74 percent of the responses aligned with the same.

When asked whether the unavailability of some options hindered their alternative banking options, the feedback indicated an agreement supported by over 70 percent of the respondents. Also, the respondents were evaluated on their understanding whether lack of trust impacted their ability to use alternate banking options. Their responses indicated an agreement of 60 percent, implying that trust was a fundamental contributor towards using alternative banking options. Further, the system's complexity stood out as the major hindrance to the use of alternate banking options and this was supported by over 80 percent agreement level.

The respondents were asked to provide feedback on the preferred banking platform based on the frequency of use. The respondents were requested to evaluate their perception on the frequency of the use of alternate banking platforms. Their responses were evaluated, collected and presented in the Table 10 below.

Table 10 Frequency of Use of Alternate Banking Platforms (Percent)

Frequency	Daily	Weekly	Monthly	Quarterly	Semi-Annually	Yearly	Not Used
Automated teller machine	2.9	24.3	36.9	–	1	0	35
Agency banking	0	1	5.9	2	0	73.3	17.8
Internet banking	1	3.9	12.7	1	0	65.7	15.7
Mobile banking	15.5	49.5	26.2	4.9	0	2.9	3.9

According to the data provided, it was found that the use of ATMs was mainly evaluated to be higher on a monthly basis. For instance, 36.9 percent of the respondents indicated they mainly used ATMs monthly, while 24.3 percent stated they used them weekly. Additionally, 35 percent stated that they had never used ATMs at all. When evaluated on whether the respondents used agency banking, the feedback indicated a unanimous response backed by 73.3 percent annual use. Similarly, 17.8 stated that they never used agency banking at all. When asked to rate the frequency of use of internet banking, the responses indicated that 12.7 percent used monthly, 65.7 percent used yearly, only 3.9 stated they used weekly, and 1 percent indicated they used it daily and quarterly, respectively. Furthermore, regarding mobile banking, a larger proportion stated that they used it weekly; this was supported by 49.5 percent while 15.5 percent said they used it daily. Similarly, 3.9 percent and 2.9 percent indicated they never used it at all and used yearly, respectively.

The respondents were asked to indicate their perception on the usage of the banking platforms on daily, weekly, monthly, quarterly, semi-annually, yearly and not-at-all. The results are indicated in Table 11 below.

Table 11 Usage Perception of Banking Platforms

Usage	Daily	Weekly	Monthly	Quarterly	Semi Annually	Yearly	Not Used
Pay utility bills	46.6	39.8	14.7	0	0	0	4.9
Money transfers	10.7	40.8	46.6	0	0	4.9	0
Household shopping	4.9	52.4	43.7	0	0	4.9	0
Balance query	16.5	33	49.5	0	0	0	1
School fees payment	0	0	23.5	50	2	14.7	9.8
Purchase of farm products	1	3.9	34.1	19.4	4.9	25.2	17.5
Others	3	3	0	1	2	73.3	17.7

As Table 11 above shows, 46.6 percent indicated daily frequency usage of banking platforms to pay utility bills. Similarly, 39.8 percent indicated weekly usage, while the remaining indicated 11.7 percent used monthly. When asked to indicate their usage of money transfers, the feedback indicated that monthly transfers were mainly done monthly (46.6 percent). Also, 40.8 percent said they conducted money transfers weekly, and 10.7 percent said they used them daily. Furthermore, the respondents were evaluated to indicate their usage of banking platforms in household shopping. Their responses indicated that 52.4 percent conducted shopping on a weekly basis, while 43.7 used it every month. When asked about the frequency of balance queries, the feedback indicated that most respondents conducted balance query on monthly basis, accounting for 49.5 percent; 33 percent indicated weekly, while only 16.5 percent inquired daily.

Regarding factors which influenced the choice of alternate banking options, the feedback was rated based on a scale and the results was as indicated in the Table 12 below.

Table 12 Factors that Influence Choice of Alternate Banking Options (Percent)

Factors	Very Low	Low	Moderate	High	Very High
Convenience					
Accessibility	0	20.4	53.4	17.5	8.7
Timeliness	0	14.6	67	12.6	5.8
Security					
Offers a secure platform to transact	0	28.2	36.9	29.1	5.8
Level of security at normal branches	0	32	52.4	13.6	4.9
Privacy of alternative banking platforms	0	17.5	50.5	27.2	4.9
Cost					
Affordability	0	1	53.4	39.8	5.8
Compatibility					
Channels compatibility	0	4.9	75.7	15.5	6.8
Complexity					
Simplicity	0	9.7	63.1	23.3	3.9
Ease of use	0	36.9	43.7	16.5	2.9
Internet banking is easy to use	1	42.7	37.9	16.5	4.9
ATM is easy to use	1	4.9	77.7	13.6	2.9
Easy process	0	23.3	59.2	15.5	4.9

From Table 12 above, over 79.6 percent indicated agreement, while only 20.4 percent stated low accessibility. Similarly, the respondents were evaluated on the rating of timelines associated with the transactio and most of the feedback indicated moderate, while only 14.6 percent indicated low. This implication suggested the existence of convenience associated with the choice of alternate banking options. Secondly, the respondents were asked to provide their rating on security as a factor influencing the choice of alternate banking options. The feedback indicated an agreement level of over 70 percent of the population. Similarly, 70 percent of the respondents agreed that reasonable security existed at the brank levels, and 78 percent supported that customer privacy was a major contributor to alternative banking option choice. Furthermore, cost and compatibility were evaluated

as influencers in adopting alternative banking options. The feedback indicated a unanimous agreement on cost as an influencer of choice. This was supported by 99 percent, while 95 percent supported that compatibility was a major influencer that resulted in consideration of alternate banking options.

Moreover, the study aimed to investigate the impact of complexity on the choice of alternative banking options. This simplicity was a major driving force (90 percent) that motivated individuals to consider alternative banking platforms. Furthermore, ease of use was highly validated by the respondents as a majority comprising 74 percent, supported the efficacy. However, the study pointed out that internet banking was relatively complex to use; this was supported by a comparatively larger group that strongly opposed the statement, which indicated that internet banking was easy to use. When asked whether ATM was easy to use, a unanimous response of over 95 percent agreement was attained, implying the efficacy of ATMs in the banking sector – see Table 12 above. Further, ease of the process was a major indicator that could drive customers' choice of alternate banking options, supported by 75 percent of responses.

4.5 Discussion of Findings

The study attained an equitable representation for both men and women. For instance, female attained 47.6 percent while male accounted for 52.4 percent; although male was relatively higher, an effective gender representation was achieved by the study. Secondly, respondents were effectively distributed across the provided age brackets. Moreover, a desirable level of education was indicated by members as a majority had attained college

level. Additionally, participants suggested that their main source of income was casual work, which indicated more unemployment within the region.

About the extent of adoption levels of banking platforms in Makueni County, the findings indicated that the majority of the individuals had one account, while the rest had more than one account. Similarly, members indicated that they mostly had both the savings and current accounts, supporting a banking culture within Makueni County. Arguably, saving accounts were mainly attributed to individuals' desire to engage in practices that enhance their future financial sustainability.

While responding to the question on the factors which influence the uptake of banking platforms in Makueni County, the finding indicated that most participants, accounting for 70 percent, had minimum coverage of between 100 metres to 1 kilometre. This implied the effective distribution of banking avenues in Makueni County. However, findings also indicated that 33 percent covered up to 10 kilometres to access the banking services. This was mainly associated with those individuals living in interior areas. Such implication point to the lack of banking facilities in rural areas of Makueni County. Comparatively, the findings indicated that banking agents played an instrumental role in empowering the locality regarding the existence of financial institutions.

The study findings indicated several factors that hindered the adoption and uptake of alternate banking options. The findings indicated that technological expertise was an instrumental tool for adopting alternate banking. This points out to efficacy of technology

and its use in the banking sector. While the existence of technology was an instrumental element, its lack highly contributed to hindrances in using alternate banking. Further, it was noted that the lack of smartphones and the internet were considered a major hindrance, as the findings suggested unanimous agreement on these factors. For instance, smartphones played a pivotal role in ensuring access to alternate banking platforms such as the internet and mobile banking. However, the inability of the members to own devices due to the prices of each highly hindered their access to such services.

Also, the study findings indicated that the most suitable banking platforms based on the frequency of use included ATM and mobile banking. Generally, consideration of these two was mainly associated with ease of use as a function of accessibility. Similarly, the findings indicated that the major aspects contributing to alternate banking avenues' uses included convenience and ease of use. For instance, a relative agreement rate of 79 percent suggested convenience motivated them to use alternate banking platforms. This suggests that customers are susceptible to consider alternate banking avenues whenever they perceive the existence of convenience.

The study findings also indicated that security associated with using alternate banking platforms majorly motivated the consideration of alternate banking avenues. This was supported by over 70 percent agreement level implying that customers' sense of safety in their finances is instrumental in driving their consumption of alternatives to the banking platforms. Additionally, customer privacy was a major contributor to the safety concerns as well as simplicity and cost were evaluated as instrumental drivers of using alternative

banking platforms. For instance, simplicity was supported by over 90 percent, indicating that the simpler the procedures, the more customers perceived the alternatives better. Similarly, the cost was mainly considered, especially when customers rated agreement levels of 95 percent, implying that the financial components were keenly evaluated before using alternative banking platforms. Finally, the process associated with alternative platforms was considered as an instrumental factor that enhanced the degree of use among members. Participants often considered ease simpler options, for instance, ATMs, which were less complex and had simple processes during use as over 95 percent agreed with this.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the findings of the study as per the objectives. The chapter also contains the conclusion made from the study and the recommendations that arise from the findings. It also provides areas for further research and the limitations of the study.

5.2 Summary

The study aimed to assess the extent of adoption levels of banking platforms in Makueni County, Kenya. The study found an equitable representation of both genders and a desirable level of education among participants. Additionally, the study found that college-level education was highly prevalent among the respondents. Similarly, it was observed that most of the respondents had one banking account whose major use was for saving purposes, indicating a strong adoption and use of banking platforms. However, despite the high level of adoption of banking platforms, the study identified several hindrances that impede the adoption of alternate banking options.

The major obstacles were the lack of technological expertise, smartphones, and internet access. This finding is consistent with previous studies highlighting the digital divide as a significant challenge facing the adoption of banking platforms in developing countries. In Kenya, the digital divide is a crucial issue, especially in rural areas with limited access to smartphones and internet connectivity. The most suitable banking platforms were ATM

and mobile banking, which was majorly attributed to ease of use and improved applicability and accessibility. Furthermore, convenience, security, simplicity, cost, and ease of use were major drivers for using alternative banking platforms.

5.3 Conclusion

The study suggests that there is a significant adoption and use of banking platforms in Makueni County, particularly through saving accounts, ATM, and mobile banking. However, there are still challenges faced by some individuals due to lack of technological expertise, smartphones, and internet, particularly those living in rural areas. The study highlights the importance of convenience, security, simplicity, cost, and ease of use in driving the use of alternative banking platforms. In addition, the respondents preferred ATM and mobile banking due to their ease of use, improved applicability, and accessibility.

Lack of technological expertise, smartphones, and internet access, however, remain significant hindrances to the adoption of alternate banking options. To enhance financial inclusion in Kenya, banks should invest in providing financial education and partner with mobile network operators to provide affordable internet connectivity.

5.4 Recommendations

From the study findings, there are several recommendations that can be made to enhance financial inclusion in Makueni County. Firstly, financial institutions should prioritize improving access to technological expertise, smartphones, and internet in rural areas to

increase the adoption and use of alternate banking options. To optimize the use of these alternatives, there should be a focus on ATM and mobile banking since they were found to be the most commonly used alternatives in the study.

Similarly, it is essential to introduce financial education programmes that target the rural population to enhance their technological expertise and create awareness of the benefits of banking platforms. By increasing financial literacy, more individuals in Makueni County were motivated to engage with existing alternatives to banking platforms. Moreover, financial institutions should engage in partnerships with digital mobile network operators to offer affordable mobile data packages to enhance internet accessibility in remote areas of Makueni County. This initiative would enable more individuals in the county to access banking platforms and ultimately promote financial inclusion.

In addition, financial institutions should focus on enhancing the simplicity, convenience, cost-effectiveness, and security of alternate banking options, particularly through ATM and mobile banking. By providing user-friendly and secure banking options, financial institutions built trust with users, leading to an increase in the adoption and use of these alternatives in Makueni County. In conclusion, implementing these recommendations in Makueni County will play a crucial role in enhancing financial inclusion and promoting economic growth. By prioritizing technological expertise, financial education programmes, partnerships with digital mobile network operators, and the improvement of alternate banking options, financial institutions and local governments in Makueni County will pave the way for a financially inclusive society.

5.5 Areas of Further Study

There are several areas that require further study to enhance financial inclusion in Makueni County. One of these areas is the need to increase the number of banking agents in rural areas. While alternate banking options such as mobile banking and internet banking have the potential to expand financial inclusion, they are limited by the lack of infrastructure in rural areas. As such, it is important to investigate the impact of increasing the number of banking agents on financial inclusion in Makueni County. This study should also examine the challenges that banking agents face and how they can be addressed to enhance their effectiveness in rural areas of Makueni County.

Another area that requires further study in Makueni County is the reasons why some residents still prefer traditional banking methods over alternate options. Despite the efforts of financial institutions to promote alternate banking options, there were residents who prefer traditional banking methods. Understanding the reasons for this preference in Makueni County is critical for developing effective strategies to promote the adoption and use of alternate banking options.

Similarly, its equally important to study the impact of financial education programmes on the adoption and use of alternate banking options in Makueni County. Financial education programmes play a crucial role in enhancing the financial literacy of individuals, particularly in rural areas. However, the effectiveness of these programmes in promoting the adoption and use of alternate banking options in Makueni County remains unclear. This study should examine the impact of financial education programmes on the adoption and

use of alternate banking options in Makueni County, the most effective ways to deliver financial education in rural areas of Makueni County, and how financial education programmes can be improved to enhance their effectiveness in Makueni County. By conducting these studies, financial institutions and local governments in Makueni County can develop effective strategies to enhance financial inclusion and promote economic growth.

5.6 Limitations of the Study

Makueni County is one of the highly sought-after rural counties for donor funding by international investors. The County Government of Makueni has intentionally taken bold steps to open the county to various international projects that have propelled the counties research projects. The county has hence been on an upward trajectory in infrastructure development as they lure investors into the county. This context should be considered when attempting to generalize these findings across other counties in the country.

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APPENDICES

Appendix I Letter of Introduction

My name is Erica Kalau Mutuku, a student from University of Nairobi currently pursuing a Master of Business Administration. As part of my coursework, I am required to conduct a research survey. The title of my research project is ‘Banking Platforms in the Rural Settings: A case study of Makueni County’. I will be grateful if you could spend a few minutes of your time to complete the questionnaire. I assure you that all information collected is strictly for academic purposes and will be kept confidential. Thank you for your kind assistance. If there is any doubt, please do not hesitate to contact me on the following email address: emkalau@gmail.com.

Section Two: Objective One

Extent of adoption levels of banking platforms in Makueni County.

6. Do you have a bank account?

Yes

No

7. How many bank accounts do you have?

1

2

3

5

More than 5

8. Of the active main accounts, you hold, what type of account are they?

Current

Savings

Both

9. Are you aware of alternate banking channels available in your bank?

Yes

No

10. If yes, which of the below have you enrolled on?

Automated Teller Machine

Mobile Banking

Internet-Banking

Agency-Banking

All

11. How did you first know about the alternate banking channels?

Bank Marketing Agents

Social Media

Print

Media(Newspapers)

Electronic media (Radio/TV)

Peers

Others.....

12. If no, are you willing to learn more about alternate banking channels?

Yes

No

Section Three: Objective Two

Factors that influence the uptake of alternate banking platforms.

13. How far is your nearest financial institution?

- Below 100m 100m-500m 500m-1km
1km-10km Above 10km

14. How did you get to know about the financial institutions nearby?

- Bank Marketing Agents Social Media Print Media
Electronic media (Radio/TV) Peers All
Others.....

15. Have you enrolled for any of the alternate banking channels?

- Yes No

16. If yes, how was the alternate banking channels set up? (in terms of documentation)

- Very easy Moderately easy Easy
Tedious Very Tedious

17. How long did the set-up process take?

- One hour or less 2-5 hours 5-12hours
1 day 3days Beyond 1 week

18. If No, state your reason(s) below.

.....
.....

19. What prevents residents in this area from using alternative banking channels? (Indicate the extent to which the following reasons hinder the adoption and uptake of alternative banking options where 1=Very low, 2=Low, 3=Moderate, 4=High, 5=Very high)

Alternative Banking Channels	1	2	3	4	5
Lack of technological expertise					
Lack of awareness of the existence of the options					
Lack of internet to use some of the banking options					
Lack of smart phones to use some of the options such as mobile banking					
Unavailability of some of options such as agency banking					
Lack of trust of the banking options					
Complex system processes					
High operating Costs					
Fear of fraud					
No interest					

Section Four: Objective Three

Determine the most suitable banking platform for Makueni County residents.

20. How often do you use the below stated alternate banking channels? (Please tick \surd only one of the options that most closely fits your opinion).

Channel\Frequency	Daily	Weekly	Monthly	Quarterly	Semi-Annually	Yearly
Automated Teller Machine						
Agency Banking						
Internet Banking						
Mobile Banking						

21. What do you use the channels for?

Purpose\Frequency	Daily	Weekly	Monthly	Quarterly	Semi-Annually	Yearly
Utility Bills						
Money Transfers						
Household Shopping						
Balance Query						
School Fees Payment						
Purchase of farm products						

22. Indicate the extent to which the following factors influence your choice of alternative banking options. (Indicate the extent to which the following reasons hinder the adoption and uptake of alternative banking options where 1=Very low, 2=Low, 3=Moderate, 4=High, 5=Very high)

Convenience	1	2	3	4	5
They can be accessed from anywhere					
Takes a short time					
Cost					
The transaction cost is affordable					
Security					
Offers a secure platform to transact					
The level of security at the branch is weak					
Normal banking is not private					
Compatibility					
Channels are compatible with the user's existing lifestyle, values, beliefs and habits					
Complexity					
Use of mobile banking is simple					
Use of agent banking is easy					
Internet banking is easy to use					
ATM is easy to use					
The steps of processing alternative banking channels easy					

Thank you for your time and responses.